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10/632,017	07/31/2003	Olaf Abels	71084	9343

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EXAMINER

GARCIA, ERNESTO

ART UNIT PAPER NUMBER

3679

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/632,017

Applicant(s)

ABELS ET AL.

Examiner

Ernesto Garcia

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 6-8, 11, 13, 16, 18, 19, 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5, 9, 10, 12, 14, 17, 20 and 23-27 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/700,598.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election

Applicant's election with traverse of claims 1, 5, 8, 9, 10, 12, 14, 15, 17, 20 and 23-27; Figures 1, 3 and 10) in the reply filed on 4/23/04 is acknowledged. The traversal is on the grounds that the different groups of claims must be listed and explained why each group lacks unity with each other group; defining the species by figure numbers is improper under PCT Rule 13.1; since a generic claim is present there must be unity of invention according to the definition of unity of invention; and, a generic claim indicates that the claims are linked so as to form a single generally inventive concept. This is not found persuasive because this is not a restriction but rather an election of species. Groups are associated with restriction (lack of unity between groups or inventions). For instance, a group directed to a fastener and a second group directed to a method of joining sheets with the same fastener is referred to 1893.03(d). Thus, under lack of unity, the fastener and the method are not restricted as the fastener is the common or corresponding special technical feature. Moreover, this national stage application contains no groups. The technical features that each species is lacking were described in the election of species. The key element is the "special technical features " meaning those technical features that define a contribution which each of the inventions, considered as a whole, makes over the prior art. Since the prior art was laid down on

the parent case, and the independent claims do not avoid the prior art, lack of unity arises in respect of any claims that depend on the independent claims (see Annex B).

The requirement is still deemed proper and is therefore made FINAL.

Claims 2-4, 6-8, 11, 13, 16, 18, 19, 21 and 22 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/23/04. Claim 8 is withdrawn as it depends from claim 7, which is not readable on the elected species.

Specification

The filing date of the parent case 09/700,598 as indicated in the specification is incorrect. The filing date of application, 09/700,598, is January 8, 2001.

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: "the sliding ring having a sliding face facing the joint ball arranged adjacent to the ball race" as described in lines 9-10 of claim 1.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 5, 9, 10, 12, 14, 15, 17, 20, 23 and 24-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claim 1, this claim states "the sliding ring being slidably mounted" in lines 8-9. At the time the invention was filed, the specification recites that the sliding ring is slidably inserted into the ball race (page 3, lines 9-10 of specification) or slidably received in the ball race (page 3, lines 12-13 of specification). The specification never mentioned that the sliding ring is "slidably mounted" in the ball race.

Regarding claims 5, 9, 10, 12, 14, 15, 17, 20 and 23, these claims directly or indirectly depend from claim 1 and therefore contain new subject matter.

Regarding claim 24, this claim states "the sliding ring being slidingly connected to the ball race" in line 8. At the time the invention was filed, the specification recites that the sliding ring is slidingly inserted into the ball race (page 3, lines 9-10 of specification) or slidingly received in the ball race (page 3, lines 12-13 of specification). The specification never mentioned that the sliding ring is slidingly connected in the ball race.

Regarding claim 25, this claim states "the sliding ring being slidingly arranged in the race" in lines 8-9. At the time the invention was filed, the specification recites that the sliding ring is slidingly inserted into the ball race (page 3, lines 9-10 of specification) or slidingly received in the ball race (page 3, lines 12-13 of specification). The specification never mentioned that the sliding ring is "slidingly arranged" in the ball race.

Regarding claim 26, nowhere does the specification indicate "the sliding face of the sliding ring sliding around the race". The terms "sliding around" are nowhere to be found in the original specification. Therefore, claim 26 contains new subject matter not originally specified.

Regarding claim 27, nowhere does the specification indicate "the sliding ring is rotatable around the race and the ball pivot". The terms "able to rotate around", "rotatable", or "slides around" are nowhere to be found in the original specification. Therefore, claim 27 contains new subject matter not originally specified.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 5, 9, 10, 14, 17, 20 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Gardner, 2,197,037 (see marked-up attachment).

Regarding claim 1, Gardner discloses, in Figure 2, a ball-and-socket joint comprising a housing **10**, a bearing shell **14**, a ball pivot **12**, a sealing bellows **19**, a ball race **26**, and a sliding ring **27**. The bearing shell **14** is inserted into the housing **10**. The ball pivot **12** with a joint ball **13** is pivotally mounted in all directions in the bearing shell **14**. The sealing bellows **19** is between the housing **10** and the ball pivot **12**. The sealing bellows **19** has a pivot-side edge area **20**. The ball race **26** is fixed on the ball pivot **12**. The sliding ring **27** receives the pivot-side edge area **20** of the sealing bellows **19**. The sliding ring **27** is slidingly mounted in the ball race **26** and has a sliding face **A9** facing the joint ball **13** arranged adjacent to the ball race **26**.

Regarding claim 5, the sliding ring **27** includes an axial extension **A10** and a radial extension **30**.

Regarding claim 9, the ball race **26** has an approximately U-shaped cross section.

Regarding claim 10, the sealing bellows **19** has a surface slidingly in contact with a surface of the ball race **26**.

Regarding claim 14, the sliding ring **27** is a shaped sheet metal part or a plastic molding. The sliding ring **27** receives and holds a portion of the sealing bellows **19** between the axial extension **A10** and the radial extension **30**. The radial extension **30** and the radial extension **30** are substantially perpendicular to each other. The ball race **26** is fixed to the ball pivot **12**.

Regarding claim 17, Gardner suggests, in Figure 5, the pivot-side edge area of the sealing bellows **19** forms a thickened material bead **47** pressed against the ball race **26** or the sliding ring **27** with an elastic pretension.

Regarding claim 20, the sliding ring **27** has an approximately L-shaped cross section.

Regarding claim 24, Gardner discloses, in Figure 2, a ball-and-socket joint sealing connection comprising a housing **10**, a ball pivot **12** with a joint ball **13**, a sealing

bellows **19**, a ball race **26**, and a sliding ring **27**. The sealing bellows **19** is connected between the housing **10** and the ball pivot **12**. The sealing bellows **19** has a pivot-side edge area **20**. The ball race **26** is fixed on the ball pivot **12**. The sliding ring **27** receives the pivot-side edge area **20** of the sealing bellows **19**. The sliding ring **27** includes an axial extension **A10** and a radial extension **30**. The sliding ring **27** is slidingly connected to the ball race **26** and the sliding ring **27** has a sliding face **A9** facing the joint ball **13** arranged adjacent to the ball race **26**.

Regarding claim 25, Gardner discloses, in Figure 2, a ball-and-socket joint comprising a housing **10**, a bearing shell **14**, a ball pivot **12**, a sealing bellows **19**, a race **26** and a sliding ring **27**. The bearing shell **14** is arranged in the housing **10**. The ball pivot **12**, with a joint ball **13**, is mounted pivotally in the bearing shell **14**. The sealing bellows **19** is arranged between the housing **10** and the ball pivot **12**. The sealing bellows **19** includes a pivot-side edge area **20**. The ball race **26** is fixed on the ball pivot **12**. The sliding ring **27** receives the pivot-side edge area **20** of the sealing bellows **19**. The sliding ring **27** is slidingly arranged in the ball race **26**.

Regarding claim 26, the sliding ring **27** has a sliding face **A9** facing the joint ball **13** and the sliding ring **27** is arranged adjacent to the ball race **26**. The sliding face **A9** of the sliding ring **27** sliding --able to slide-- around the race **26**.

Regarding claim 27, the sliding ring **27** is able to rotate (rotatable) around the race **26** and the ball pivot **12**. There is no indication of the sliding ring **27** being permanently fixed to the ball race **26**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner, 2,197,037, in view of Japanese patent, JP-9-250637.

Regarding claim 12, Gardner, as discussed above, fails to disclose the surface of the sealing bellows **19** forming a labyrinth seal together with the surface of the ball race **26**. The Japanese patent teaches, in Figure 5, a surface of a sealing bellows **4**, which is in contact with a surface of a ball race **9**, forms a labyrinth seal (**3a or 11**) together with the surface of the ball race **9** to prevent debris entering a ball-and-socket joint. Therefore, as taught by the Japanese patent, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the surface of the

sealing bellows forming a labyrinth seal together with the surface of the ball race to prevent debris entering the ball-and-socket joint.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gardner, 2,197,037, in view of Unterstrasser, 4,305,596.

Regarding claim 23, Gardner, as discussed above, fails to disclose the sliding ring **27** being vulcanized directly to the pivot-side edge area **20** of the sealing bellows **19**. Unterstrasser teaches, in Figure 2, a sliding ring 40 vulcanized directly to a pivot-side edge area 52 of a sealing bellows 50 to make a connection between the bellows and the ring (col. 3, lines 5-7). Therefore, as taught by Unterstrasser, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vulcanize the sliding ring directly to the pivot-side edge are of the sealing bellows to make a connection.

Allowable Subject Matter

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

regarding claim 15, the prior art of record does not disclose or suggest a leg of a ball race, which is contact with a sliding ring, having lugs arranged at spaced locations from one another.

Conclusion

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese patent, JP2-199317, and Zeigler, 3,391,952 show a similar ball-and-socket joint.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 9:30-6:00. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 703-308-2686. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



E.G.

July 9, 2004

Attachments: one marked-up copy of Gardner, 2,197,037.



DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
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Best Available Copy